REMARKS

In the Office Action mailed March 20, 2007, the Examiner rejected claims 1-32. No

claims are amended by the present Response. In view of following remarks, Applicants

respectfully request reconsideration and allowance of all pending claims.

Claim Rejections under Doctrine of Obviousness-Type Double Patenting

In the Office Action, the Examiner rejected claims 1-32 on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No.

7,035,159 (hereinafter referred to as "the Janzen reference"). Further, the Examiner

provisionally rejected claims 1-32 as being unpatentable over claims 1-30 of copending

Application No. 10/816,241 (hereinafter referred to as "the '241 application"). Although

Applicants do not necessarily agree with the Examiner's assertion, Applicants are amenable to

filing a terminal disclaimer upon allowance of the claims in the present application. Any such

filing will, of course, be affected by any restrictions or election requirements made by the

Examiner during the course of prosecution. Accordingly, Applicants respectfully request that the

Examiner hold in abeyance the double-patenting rejection until the present claims are determined

to be allowable.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-5 and 21-24 under 35 U.S.C. § 103(a) as being

unpatentable over Trick (U.S. Patent No. 5,995,405, hereafter referred to as "Trick") in view of

Abrahams et al. (U.S. Publication No. 2004/0078454, hereafter referred to as "Abrahams") and

further in view of Nerl (U.S. Publication No. 2002/0016897, hereafter referred to as "Nerl");

rejected claims 7-11 and 25-32 under 35 U.S.C. § 103(a) as being unpatentable over Trick in

view of Abrahams; rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Trick in

view of Abrahams in view of Nerl and further in view of Wu (U.S. Patent No. 7,064,994,

hereafter referred to as "Wu"); rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable

over Trick in view of Abrahams and further in view of Wu; and rejected claims 13-20 under 35

U.S.C. § 103(a) as being unpatentable over Abrahams reference in view of Nerl. Applicants

respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex*

parte Wolters and Kuypers, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be

established by combining the teachings of the prior art to produce the claimed invention absent

some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v.*

Montefiore Hospital, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere

fact that references can be combined or modified does not render the resultant combination

obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916

F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the

Examiner must not only show that the combination includes *all* of the claimed elements, but also

a convincing line of reason as to why one of ordinary skill in the art would have found the

claimed invention to have been obvious in light of the teachings of the references. *Ex parte*

Clapp, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Summary of Applicants' Arguments and Remarks Regarding Examiner's "Response to Amendments" and "Response to Argument" Sections of the Office Action

In and attempt to clarify Applicant's arguments and to mitigate the likelihood of further rejections based on the cited references, Applicants provide the following summary regarding the subject matter recited in independent claims 1, 7, 13, 17, 21, 25 and 29. Applicants note that a similar summary was provided in the prior Response to Final Office Action filed by Applicants on February 14, 2007. However, though the Examiner did withdraw the finality in the present Office Action, none of Applicants arguments in the prior Response to Final were addressed in detail by the Examiner in the present Office Action, with the minor exception of the arguments made with regard to dependent claims 6 and 12. Specifically, the Examiner merely added the Nerl and Wu references to the prior obviousness rejection of dependent claim 6 based on Trick in view of Abraham, while removing the application of Applicants' admitted prior art. Similarly, the Examiner merely added the Wu reference to the prior obviousness rejection of dependent claim 12 based on Trick in view of Abraham, while removing the application of Applicants' admitted prior art. While Applicants thank the Examiner for accepting Applicants' arguments with regard to dependent claims 6 and 12, Applicants note the arguments set forth in response to the Examiner's rejections of the independent claims were wholly ignored.

As summarized below, only cursory comments made with regard to Applicants' arguments pertaining to the independent claims were made in the Response to Arguments section. Instead, the Examiner merely provided identical rejections of each of the independent claims, and made brief and conclusory statements with regard to Applicants' lengthy arguments,

without sufficiently addressing and providing a reasonable basis for the continued rejection of Applicants' prior arguments and the present claims. Specifically, the Examiner continues to characterize the teachings of the cited references (most egregiously with regard to the teachings of Trick and Abraham) in a way that is wholly unsupportable by the references themselves. Accordingly, Applicants respectfully request that the Examiner carefully consider Applicants' arguments, a summary of which has been provided below, such that the application can speed toward issuance, noting the "goal of examination" as articulated in M.P.E.P. 706. Further, Applicants respectfully request that if the Examiner continues to maintain his present assertions with regard to the teachings of Trick and Abraham, that the Examiner provide more than conclusory statements and unsupported assertions to that affect.

Throughout Applicants' specification, including the claims, and throughout the prosecution history of the present application, Applicants have repeatedly distinguished between operating current values that are: 1) device-type specific; 2) manufacturing lot specific; and 3) device specific. In accordance with embodiments recited in various independent claims, embodiments of the invention are directed to the utilization of *lot specific* or *device specific* operating current values of volatile memory devices. By measuring each device and storing values *associated with each specific device* or storing values associated with a particular lot, rather than relying on device-type characterizations, as in the prior art, the operating current values for *a specific device* (not merely worst case operating current values for a specific *type* of device, such as a DRAM) or operating current values corresponding to a specific manufacturing lot in which a particular device was manufactured, operation of the devices may be optimized.

To provide exemplary context to aid in examination, and as would be fully appreciated by those skilled in the art, individual devices are fabricated in a manufacturing lot. For example, 1000 devices may be manufactured in a particular lot before the devices are tested and parameters are adjusted. However, 1,000,000 devices of that *type* may be manufactured overall, in 1000 different lots. As explained in the present specification, each device has a particular operating current value. Applicants propose that rather than setting operating current values to account for the worst case scenarios associated with a particular device-*type* (i.e., using data acquired from prior testing of other devices of that particular device-type), specific and unique operating current values can be obtained from each *specific device* or manufacturing *lot* and those *device specific* or *lot specific* values can be used to optimize operation of that specific device.

Specifically, independent claims 1 and 21 recite utilization of "operating currents *uniquely* corresponding to a *lot* in which the [plurality of] volatile memory devices were manufactured," rather than the general device-specific operating currents that are typically listed on data sheets. (Emphasis added.) By implementing the *manufacturing lot specific operating current values*, claims 1 and 21 provide a more accurate technique than the typical data sheet-based methods. Specification, p. 12, ll. 24-25, p. 13, l. 1.

Independent claims 7, 25, and 29 recite the utilization of "operating currents *uniquely* corresponding to *each* of the plurality of *memory devices*," rather than the general device-type specific operating current currents that are typically listed on data sheets. (Emphasis added.) By

implementing the operating currents *specific to each unique memory device*, claims 7, 25, and 29

provide a more accurate technique than the typical data sheet-based methods. Specification, p.

12, ll. 24-25, p. 13, l. 1.

Independent claim 13 recites a method of manufacturing a memory module comprising,

inter alia, "measuring operating current values in each of a plurality of volatile memory devices;"

and "storing each of the operating current values corresponding to each of the volatile memory

devices in a non-volatile memory device." That is, *actual operating current values* are measured

for each volatile memory device and those values are stored for later use, to optimize the

performance of that particular device, rather than setting operating current values in accordance

with worst case value to optimize the performance of that particular device, rather than setting

operating current values in accordance with worst case values for that *type* of device.

Independent claim 17 recites, *inter alia*, "measuring operating current values in each of a

plurality of volatile memory devices, wherein the plurality of volatile memory devices

correspond to a single manufacturing lot; calculating average operating current values for the

manufacturing lot;" and "storing the average operating current values in a non-volatile memory

device." That is, *actual operating current values* are measured for each volatile memory device

and average operating current values for the manufacturing lot in which those specific devices

were manufactured are calculated using the measured values from the specific devices. Those

values are stored for later use, to optimize the performance of that particular device by setting

operating current values in accordance with the average operating current values for the lot,

rather than setting operating current values in accordance with worst case value to optimize the

performance of that particular device, rather than setting operating current values in accordance

with worst case values for that *type* of device.

Applicants stress that this utilization of *device specific* or *manufacturing lot specific*

operating current values, which are based upon *actual values measured for those specific devices*

that will be used in the recited system or memory module, is <u>not</u> taught by the cited references.

Indeed, the primary references cited by the Examiner (i.e., the Abrahams reference and the Trick

reference) each disclose using *device-type specific* operating current values. That is, any

operating current values stored in the system are merely average or worst-case operating current

values for that type of device. Those values are based on prior characterizations of devices of

that type and *not* based on measured values for that particular device that is being implemented

in the system. Indeed, this is completely consistent with Applicants' description of the prior art

and is in stark contrast to each of Applicants' claims. As discussed with greater specificity

below, Applicants note that the Examiner has failed to address Applicants' continued assertions

that each of the cited references merely discloses using *device-type specific* values, as starkly

contrasted with Applicants' claims which clearly recite using *device specific* or *lot specific*

values.

To be clear, there is absolutely nothing in Abraham or Trick that would lead one to

believe that the references teach or suggest using anything other than device-type specific

operating current values. That is, at most, these references merely fall in line with what

Applicants have admitted as being prior art: storing operating current values associated with a

specific type of device. There is no discussion in any of the cited references of measuring the

operating current *of each specific device* that is to be used in the system and storing those

measured operating current values that pertain uniquely to the measured values on those specific

devices, to optimize the usage of that particular device. To the contrary, the values stored in the

EPROM of Trick and stored in the non-volatile memory of Abrahams are NOT unique to the

actual devices used in that system. The values stored are merely prior characterizations and

values based on the type of device, and as previously described, those characterizations are made

based on worst-case operating conditions. There is absolutely no discussion and no basis for the

Examiner's assertion regarding device-specific or lot-specific operating current values being

stored. None of the cited references teaches or suggests that operating current values are

independently measured for each device and that those unique measured values, corresponding

uniquely to those devices from which they were measured are then stored for use in a system to

optimize the utilization of those particular devices in the system.

In the Response to Arguments section of the Office Action, the Examiner made two

further assertions in response to Applicants assertions above, which are analyzed in greater detail

below, with specific application to each independent claim. The Examiner's response is

reproduced in its entirety as follows:

> The EPROM of Trick stores the information of the
> corresponding IMM. Therefore the information stored is EPROM
> corresponds to that particular IMM. Thus, the information is
> device specific or lot specific.

> In addition, operating currents of Abrahams [0009] are

component-specific (claim 1 of page 6). Therefore, these currents are lot-specific too.

Applicants vehemently traverse the Examiner's conclusions regarding the teachings of Trick and Abraham and continue to be perplexed by the Examiner's support for drawing these conclusions, as Applicants can find no reasonable explanation for the Examiner's contentions. The Examiner continues to point to the same sections of these references, while intermittently citing an additional passage or making additional statements, with each passing exchange. The Application of the Trick reference and the Abraham reference, and the shortcomings thereof are summarized above, and discussed at great length below, but once again, Applicants feel obligated to specifically address the cursory statements and unsupported conclusions drawn therefrom, made in the Response to Arguments section.

With specific regard to Trick, the Examiner makes no further citation in Trick but merely states that the EPROM of Trick stores the information corresponding to the IMM, and concludes that because the information corresponds to the IMM, the information must be device specific or lot specific. This is simply incorrect. While Trick does indeed describe storing information on an EEPROM, relating to configuration information of the IMM, there is absolutely *nothing* to suggest that this information uniquely corresponds to those DRAMs that form that IMM. Trick expressly indicates that "[t]he first 128 bytes [of the EEPROM] are used to store *industry standard information* relating to the IMM." Col. 1, lines 45-47. Emphasis added. That is, any information relating to the DRAMs is clearly industry standard information (i.e., values corresponding to all DRAMs, and not values corresponding to the specific DRAMs that make up

that particular IMM). This variation is extremely important. Any operating current values stored

on the EEPROM of Trick correspond to industry standard (i.e., worst-case acceptable operating

current ranges and values), and thus, if the system accesses those operating current values and

configures the system utilizing those values, the system will be configured using those worst-

case, acceptable operating current values. As discussed in the background of Applicants'

specification, using these values may result in wasted bandwidth and less efficient systems. If, as

taught by Applicants, the values for each device (e.g., DRAM) on a memory module (e.g., IMM)

are measured and those device-specific values are then stored in a non-volatile memory device on

the memory module (e.g., EEPROM), the system can use those measured values to optimize the

system for use of those unique and specific devices such that each memory module can operate

as efficiently as possible according to the particular devices used. This is in stark contrast to the

system and methods of Trick.

   With specific regard to Abrahams, the Examiner continues to cite paragraph [0009],

which has been addressed specifically in prior Responses, and which is discussed in detail below.

In addition, the Examiner also cites claim 1 of Abrahams, which recites, in relevant part, "a

component comprising a non-volatile memory, wherein the non-volatile memory stores a value

of an operational parameter that specifies an operating condition for the component[.]"

Applicants again vehemently assert that absolutely nothing in the Abrahams reference teaches or

suggests that those operational parameters are anything other than industry standard values which

correspond to the particular type of component employed. As repeatedly asserted by Applicants,

measuring operating current values for each device and storing those particular and unique

values, rather than relying on industry standard operating current values, allows the system to be

uniquely optimized based on the particular devices employed in that system. The complete

omission of any discussion in Abraham regarding measuring and storing values relating to the

specific devices being employed, rather than relying on industry standard data, is a clear

indication that these extra steps (i.e., measuring the operating current values for each specific

device, and storing them for use in the system), are not contemplated by Abraham.

Finally, Applicants assert that Nerl fails to remedy the deficiencies of either Trick or

Abrahams. Indeed, the Examiner merely referred to Nerl for its alleged teaching that it is well

known in the art that a DIMM can be an FRU. Accordingly, even if Nerl disclosed what is

asserted by the Examiner, it does not remedy the deficiencies discussed above.

In summary, and as discussed in more detail below, each of the present independent

claims is directed to measuring, storing and/or utilizing *unique* operating current values for

specific devices and using those values to set operating parameters, or calculating averages based

on those measured and unique values corresponding to those devices in a particular

manufacturing lot. In stark contrast, Abrahams, Trick and Nerl only disclose or suggest utilizing

device-type (i.e., industry standard) values. Accordingly, none of the references, taken alone or

in combination, teaches or suggests the subject matter recited in any of the independent claim.

Applicants maintain that there is a clear distinction in the various embodiments of

Applicants' invention and the cited references. While Applicants can think of no way to make

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this point any clearer and maintain that each of the present independent claims clearly and unambiguously distinguish over the cited references, Applicants welcome any suggestions that the Examiner may have to further clarify the recited subject matter. It is not Applicants' intention to belabor the present prosecution or to capture more than Applicants are entitled to claim, in view of the prior art. However, because Applicants firmly believe that the present claims clearly and unambiguously distinguish over the cited references, in their current form, Applicants solicit the Examiner for any suggestions that might be mutually beneficial in achieving the goal of examination and furtherance of the scientific arts.

Claims 1-5 and 21-24 Are Not Obvious Over Trick in View of Abrahams and Nerl

Computer device manufacturers design memory devices to operate within a predetermined temperature range. Specification, p. 2, ll. 19-20. Given that the memory devices in a computer system employ electric current to perform their intended functions, the amount of heat in the device is a function of the flow of current through the device. Specification, p. 3, ll. 4-7. Accordingly, memory devices are typically accompanied by data sheets specifying operating currents for the devices in various modes and conditions. Specification, p. 3, ll. 21-23. These data sheets correspond to a given type of memory chip and represent the worst case scenario for that particular type of device. Specification, p. 4, ll. 7-9. Any given memory device can often operate at currents 15-40% outside of the data sheet values. Specification, p. 3, ll. 10-12. Therefore, by implementing the data sheet values, the full extent of the device's capabilities are not being exploited. Specification, p. 3, ll. 12-14.

Accordingly, independent claims 1 and 21 of the present application recite the utilization

of "operating currents *uniquely* corresponding to a *lot* in which the [plurality of] volatile memory

devices were manufactured," rather than the general device-specific operating currents that are

typically listed on data sheets. (Emphasis added.) By implementing the lot-specific operating

current values, claims 1 and 21 provide a more accurate technique than the typical data sheet-

based methods. Specification, p. 12, ll. 24-25, p. 13, l. 1. Consequently, the method of claim 1

and the memory module of claim 21 result in a more efficient use of the specific memory

device's capabilities.

Applicants respectfully submit that neither Trick, Abrahams, nor Nerl, alone or in

combination, disclose each and every feature of independent claims 1 and 21. Specifically, none

of the aforementioned references teaches utilizing operating currents *uniquely* corresponding to a

lot in which the memory devices were manufactured, as recited in claims 1 and 21.

Regarding Trick, the Examiner asserted that Trick teaches utilizing operating parameters

uniquely corresponding to a lot in which the volatile memory devices were manufactured. Office

Action, p. 4. Specifically, the Examiner asserted that the electrically erasable programmable

ROM (EEPROM) disclosed in Trick is associated with In Line Memory Modules (IMMs) and,

therefore, identifies the lot of memory devices. *Id.* Applicants respectfully disagree and

respectfully submit that Trick does not teach operating parameters uniquely corresponding to a

lot in which the volatile memory devices were manufactured, as asserted by the Examiner.

Rather, Trick discloses a mechanism for adapting an IMM so that it may be configured to accommodate a standard EEPROM or a "daisy chain" EEPROM. Trick, col. 2, ll. 21-25. Trick is not concerned with improving the accuracy of determining operating parameters of memory devices, specifically the operating current, as in the present application. Indeed, Trick discloses in general terms the functions of the EEPROM, but does not discuss the operating parameters of the IMM. Trick, col. 1, ll. 43-56. To the extent that Trick discloses that configuration information is stored on the EEPROM, Trick fails to teach that the configuration information is lot-specific configuration information. *See id.* at col. 1, ll. 31-34. Therefore, Trick does not disclose the utilization of "operating currents uniquely corresponding to a lot in which the [plurality of] volatile memory devices were manufactured," as recited by independent claims 1 and 21.

Further, Applicants assert that the Examiner's attempt to remedy the deficiencies of Trick by citing Abrahams is insufficient. The Examiner merely relied on Abrahams for its alleged disclosure of reading operating current values from a non-volatile memory device on a memory module. Office Action, p. 5. To the extent Abrahams may disclose the reading of operating current values, nowhere does Abrahams teach or suggest that those operating current values "uniquely correspond[] to a lot in which the volatile memory devices were manufactured," as recited in independent claims 1 and 21. For example, Abrahams provides that "[t]he operational parameters may be *specific to each type of component.* For example, disk drives may have different operational parameters than array controllers." Abrahams, p. 2, ¶ 23 (emphasis added). Therefore, the specification in Abrahams teaches utilizing parameters specific to a particular type

of component and not lot-specific parameters. In fact, Abrahams is devoid of any mention of lot-specific parameters such as lot-specific current values. The inaccuracy and inefficiency associated with using values associated with a particular type of component is exactly the problem that implementation of the present invention is designed to eliminate. Therefore, Abrahams does not disclose the utilization of "operating currents uniquely corresponding to a lot in which the [plurality of] volatile memory devices were manufactured," as recited in claims 1 and 21.

Applicants further assert that Nerl fails to remedy the deficiencies of either Trick or Abrahams. Indeed, the Examiner merely referred to Nerl for its alleged teaching that it is well known in the art that a DIMM can be an FRU. Office Action, p. 5. Accordingly, even if Nerl disclosed what is asserted by the Examiner, it does not remedy the deficiencies discussed above.

In view of the remarks set forth above, Applicants respectfully submit that independent claims 1 and 21 and their dependent claims are not rendered obvious by the cited combination. Accordingly, Applicants request withdrawal of the Examiner's rejection and the allowance of claims 1-5 and 21-24.

Claims 7-11 and 25-32 Are Not Obvious Over Trick in View of Abrahams

Independent claims 7, 25, and 29 of the present application recite the utilization of "operating currents uniquely corresponding to each of the plurality of memory devices," rather than the general device-type specific operating current currents that are typically listed on data

sheets. By implementing the operating currents specific to each unique memory device, claims 7, 25, and 29 provide a more accurate technique than the typical data sheet-based methods. Specification, p. 12, ll. 24-25, p. 13, l. 1. Consequently, the method of claim 7, the memory module of claim 25, and the computer system of claim 29 result in a more efficient use of the specific memory device's capabilities.

Applicants respectfully submit that neither Trick nor Abrahams, alone or in combination, disclose each and every feature of independent claims 7, 25, and 29. Indeed, given that the operating currents specific to each memory device recited in independent claims 7, 25, and 29 offer the same advantages as the lot-specific values utilized in independent claims 1 and 21, Applicants rely on the remarks presented above to demonstrate that neither Trick nor Abrahams teach the utilization of operating currents *uniquely* corresponding to *each* of a plurality of memory devices. Accordingly, Applicants request withdrawal of the Examiner's rejection and allowance of claims 7-11 and 25-32.

Claim 6 Is Not Obvious Over Trick in View of Abrahams, in View of Nerl and Further in view of Wu

In the rejection of dependent claim 6, the Examiner asserted that Trick in view of Abrahams, in view of Nerl and further in view of Wu discloses all of the recited features. Applicants respectfully assert that the rejection is deficient because neither the Nerl reference, nor the Wu reference, alone or in hypothetical combination, remedy the deficiencies of Trick and Abrahams. That is that neither Nerl, nor Wu obviates the deficiencies of Trick and Abrahams discussed above with reference to independent claim 1. For at least this reason, Applicants

submit that Trick, Abrahams, Nerl and Wu, alone or in combination, do not disclose each and

every feature of dependent claim 6. Accordingly, Applicants respectfully request withdrawal of

the rejection of claim 6 under 35 U.S.C. § 103.

Claim 12 Is Not Obvious Over Trick in View of Abrahams, and Further in view of Wu

In the rejection of dependent claim 12, the Examiner asserted that Trick in view of

Abrahams, and further in view of Wu discloses all of the recited features. Applicants

respectfully assert that the rejection is deficient because the Wu reference does not remedy the

deficiencies of Trick and Abrahams. That is that Wu does not obviate the deficiencies of Trick

and Abrahams discussed above with reference to independent claim 7. For at least this reason,

Applicants submit that Trick, Abrahams, and Wu, alone or in combination, do not disclose each

and every feature of dependent claim 12. Accordingly, Applicants respectfully request

withdrawal of the rejection of claim 12 under 35 U.S.C. § 103.

Claims 13-20 Are Not Obvious Over Abrahams in View of Nerl

Rejection of Claim 13

In accordance with embodiments of the present techniques, memory devices may be

individually tested such that device-specific operating current values uniquely corresponding to

each memory device can be recorded and stored in a database. Specification, p. 13, ll. 20-23. In

one embodiment, the operating current values in the database may be used during fabrication of a

memory module wherein the database is accessed during fabrication and a non-volatile memory

device may be uniquely programmed in accordance with the specific operating current values for

the particular memory devices on the memory module. Specification, p. 13, l. 13 – p. 14, l. 4. After fabrication and programming of the non-volatile memory device, a memory module can be shipped for implementation in a system and operating current values may be accessed by the system from the non-volatile memory device such that the system can be configured to operate optimally within the capabilities of the particular memory devices. Specification, p. 14, ll. 4-9.

Accordingly, claim 13 recites a method of manufacturing a memory module comprising, *inter alia*, "measuring operating current values in each of a plurality of volatile memory devices;" and "storing each of the operating current values corresponding to each of the volatile memory devices in a non-volatile memory device."

In the rejection of claim 13, the Examiner stated that Abrahams discloses "measuring operating current values in each of a plurality of memory devices (lines 13-15 of page 1)." Office Action, p. 13. The Examiner further stated that Abrahams discloses "storing each of the operating current values corresponding to each of the plurality of memory devices in a non-volatile memory device." *Id.* Applicants respectfully disagree with the Examiner's assertions regarding Abrahams.

Claim 13 recites measuring operating current values in each of a plurality of volatile memory devices and storing each of the operating current values in a non-volatile memory device. While Applicants agree that Abrahams does teach storing operational parameters in a non-volatile memory device, these operational parameters are specific to a type of component,

such as those found on a component's data sheet. Abrahams, p. 2, ¶ 22. The operational

parameters that may be stored on the non-volatile memory device are not the operating current

values that were measured for each of a plurality of volatile memory devices. Indeed, to the

extent Abrahams discloses the measuring of operational parameters, Applicants respectfully

submit that Abrahams discloses the measuring of the current operating conditions of the

component. Abrahams, p. 1, ¶ 11. The current operating conditions of the component then may

be compared to the operational parameters for a type of component that may be stored in the non-

volatile memory. *Id.* Accordingly, Abrahams does not disclose measuring operating current

values in each of a plurality of memory devices and storing each of the operating current values

in a non-volatile memory device.

Applicants further assert that Nerl fails to remedy the deficiencies of Abrahams. Indeed,

the Examiner merely referred to Nerl for its alleged teaching that it is well known in the art that a

DIMM can be an FRU. Office Action, p. 14. Accordingly, even if Nerl disclosed what is

asserted by the Examiner, it does not remedy the deficiencies discussed above.

In view of the remarks set forth above, Applicants respectfully submit that independent

claim 13 and its dependent claims are not rendered obvious by the cited combination.

Accordingly, Applicants request withdrawal of the Examiner's rejection and allowance of claims

13-16.

Rejection of Claim 17

Claim 17 recites, *inter alia*, "measuring operating current values in each of a plurality of volatile memory devices, wherein the plurality of volatile memory devices correspond to a single manufacturing lot; calculating average operating current values for the manufacturing lot;" and "storing the average operating current values in a non-volatile memory device."

As discussed above with respect to the rejection of claim 13, Abrahams does not disclose measuring operating current values in each of a plurality of volatile memory devices. Indeed, to the extent Abrahams discloses the measuring of operational parameters, Applicants respectfully submit that Abrahams discloses the measuring of the current operating conditions of the component. Abrahams, p. 1, ¶ 11. Further, nowhere does Abrahams disclose that the operating current values are measured for a plurality of volatile memory devices that correspond to a single manufacturing lot. Accordingly, Abrahams does not disclose measuring operating current values in each of a plurality of volatile memory devices, wherein the plurality of memory devices correspond to a single manufacturing lot.

Moreover, in contrast to the present claims and as admitted by the Examiner, Abrahams also does not disclose "calculating *average* operating current values for the manufacturing lot" and "storing the *average* operating current values in a non-volatile memory device," as recited by independent claim 17. *See* Office Action, p. 14. Rather, the Examiner argues that "one of ordinary skill in the art would have been motivated to store average current corresponding to the lot in the non-volatile memory depending on his design choice." *Id.* Applicants respectfully

disagree and submit that the Examiner has not demonstrated a "convincing line of reason as to

why one of ordinary skill in the art would have found the claimed invention to have been obvious

in light of the teachings of the references." *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Indeed, as previously mentioned, Abrahams is devoid of any disclosure regarding lot-specific

parameters, such as the average operating currents values for the manufacturing lot of claim 17.

Rather, to the extent Abrahams discloses that operating parameters are stored in a non-volatile

memory, Abrahams discloses the use of general device-specific parameters. For example,

Abrahams discloses that "[t]he operational parameters may be *specific to each type of*

component." Abrahams, p. 2, ¶ 23 (emphasis added). In view of this teach of Abrahams, there is

no convincing line of reasoning as to why one of ordinary skill in the art would modify

Abrahams in the manner recited in independent claim 17.

Applicants further assert that Nerl fails to remedy the deficiencies of Abrahams. Indeed,

the Examiner merely referred to Nerl for its alleged teaching that it is well known in the art that a

DIMM can be an FRU. Office Action, p. 14. Accordingly, even if Nerl disclosed what is

asserted by the Examiner, it does not remedy the deficiencies discussed above.

In view of the remarks set forth above, Applicants respectfully submit that independent

claim 17 and its dependent claims are not rendered obvious by the cited combination.

Accordingly, Applicants request withdrawal of the Examiner's rejection and allowance of claims

17-20.

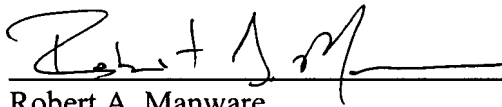## Authorization for Extensions of Time and Payment of Fees

Applicants do not believe that any fees are due at this time. However, if any fees,

including fees for extensions of time and other reasons, are deemed necessary to advance

prosecution of the present application, at this or any other time, Applicants hereby authorize the

Commissioner to charge such requisite fees to Deposit Account No. 06-1315; Order No.

MICS:0103/FLE/MAN (No. 02-1327). In accordance with 37 C.F.R. § 1.136, Applicants hereby

provide a general authorization to treat this and any future reply requiring an extension of time as

incorporating a request thereof.

Conclusion

Applicants respectfully submit that all pending claims are in condition for allowance.

However, if the Examiner wishes to resolve any other issues by way of a telephone conference,

the Examiner is kindly invited to contact the undersigned attorney at the telephone number

indicated below.

Respectfully submitted,

Date: June 19, 2007

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